

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs. 1, 2, 6 and 9. These sheets, replace the original sheets including Figs. 1, 2, 6 and 9.

In Figs. 1 and 2, the term "DIRECITON" has been amended to read --DIRECTION--. In Fig. 6, the element number 135 in three places are amended to 131, 135a and 135b, respectively. In Fig. 9, the typo (i.e., "WHEHTER") in the box of step 1010 has been corrected to read --WHETHER--.

Attachment: Three (3) Replacement Sheets

### **REMARKS**

Applicant respectfully requests reconsideration of this application in view of the foregoing amendment and following remarks.

#### **Objection**

Portions of the specification (i.e., page 13/line 11, page 14/line 11, page 15/line 11, page 19/line 26, and page 20/lines 1-6), drawings (i.e., Figs. 1, 2, 6 and 9) and claims (i.e., claims 14, 17, 19 and 20) have been objected to as having minor informalities.

Relevant portions of the specification, drawings and claims have been amended as shown above addressing the objections.

Applicant respectfully requests that these objections be withdrawn.

#### **Status of the Claims**

Claims 1-25 are pending in this application. Claims 1, 18, 20 and 22-25 are independent. Claim 24 is allowed. Claims 2, 4, 7-12, 14, 15, 17, 19 and 21 are objected to. Claims 1, 3, 5, 6, 13, 16, 18, 20, 22, 23 and 25 are rejected. By this amendment, independent claims 1, 18, 20, 22, 23 and 25 are amended. Dependent claims 14, 17 and 19 are also amended. New claims 26-39 are added. No new matter has been added by this amendment.

#### **Rejection under 35 U.S.C. §102**

Claims 1, 3, 5, 6, 13, 16, 18 and 20 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,700,715 to Sorg et al. ("Sorg").

Claims 1, 6, 13, 16, 18, 20, 22, 23 and 25 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,411,426 to Meehan et al. ("Meehan").

Sorg discloses an oscillation damping system having oscillation sensors 3 and actuators 4. It is indicated in Sorg that the sensors detect external oscillations applied to the optical lens 1 and the actuators are activated to generate oscillations having the same frequency and amplitude but anti-phase thereby compensating the external oscillations.

Meehan discloses a method and apparatus for active compensation of aberrations in an optical system. Referring to Fig. 4A and 4B of Meehan, the pneumatic bellows 420 are activated to push/pull the force bar 410 thereby applying a force (i.e., pressure) to the periphery of mirror 170 based on the environmental temperatures. It is indicated in Meehan that the CPU 612 receives temperature and pressure data from sensing module 620, i.e., temperatures and pressures are detected.

Independent claims 1, 18, 20, 22, 23 and 25 have been amended for further clarification. One of the aspects of the present invention as featured in independent claim 1 as amended is directed to a retainer for holding an optical element such as a lens. The retainer of the present invention comprises "a detector" configured to detect the deformation amount of the optical element and "an adjustment unit" configured to adjust the deformation of the optical element. In particular, the adjustment unit of the present invention adjusts the deformation of the optical element by applying a force to the optical element in a direction opposing to a gravity direction based on the detection result by the detector. Other independent claims (i.e., claims 18, 20, 22, 23 and 25) recite similar features to amended claim 1 as discussed herein.

Referring to Figs. 1 and 2 of the present application, the retainer 100 holding the optical element 110 includes a retaining member 120 and an adjustment unit 130. Referring to Fig. 3 of the present application, the hook 131 contacts the bottom surface of the optical element 110, and

the strain gauge 134 (i.e., a detector) is placed on a portion of the hook which is controlled by an elastic force generated from the elastic member 132. The strain gauge measures/detects the surface deformation of the optical element, and the surface deformation is adjusted by applying the elastic force to the optical element in a direction opposing to a gravity direction based on the detected result.

In contrast, it appears that Sorg's oscillation damping system adds a force to the optical element in a circumference direction as shown in Fig. 2. In other words, Sorg's oscillation damping system does not apply a force to an optical element in a direction opposing to a gravity direction as specifically recited in the amended claims 1, 18, 20, 22, 23 and 25.

Moreover, Meehan, while disclosing the sensing module 620 to measure the temperatures and pressures of the optical system, does not disclose a detector for detecting a deformation amount of the optical element. Meehan further fails to show or suggest an adjustment unit to adjust the deformation of the optical element by applying a force to the optical element in a direction opposing to a gravity direction based on a deformation amount.

Accordingly, each of claims 1, 18, 20, 22, 23 and 25 is believed neither anticipated by nor rendered obvious in view of Sorg and Meehan, either taken alone or in combination, for at least the reasons discussed above.

Reconsideration and withdrawal of the rejections of claims 1, 18, 20, 22, 23 and 25 under 35 U.S.C. §102 is respectfully requested.

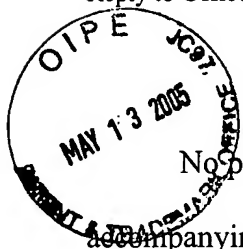
Applicant has not individually addressed the rejections of the dependent claims because Applicant submits that the independent claims from which they respectively depend are in condition for allowance as set forth above. Applicant however reserves the right to address such

rejections of the dependent claims should such be necessary.

**New Claims**

Claims 26-39 have been added to recite the claimed invention in an alternative manner. In particular, each of claims 26-39 is an independent claim rewritten from objected to claims 2, 4, 7-12, 14, 15, 17, 19 and 21, respectively. New claims 26-39 are accordingly believed to be allowable over the cited art of records.

Applicant believes that the application is in condition for allowance and such action is respectfully requested.



**AUTHORIZATION**

No petitions or additional fees are believed due for this amendment and/or any accompanying submissions. However, to the extent that any additional fees and/or petition is required, including a petition for extension of time, Applicant hereby petitions the Commissioner to grant such petition, and hereby authorizes the Commissioner to charge any additional fees, including any fees which may be required for such petition, or credit any overpayment to Deposit Account No. 13-4500 (Order No. 1232-5294). A DUPLICATE COPY OF THIS SHEET IS ENCLOSED.

An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,  
MORGAN & FINNEGAN, L.L.P.

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By: Sungho Hong  
Sungho Hong  
Registration No. 54,571

Correspondence Address:

MORGAN & FINNEGAN, L.L.P.  
3 World Financial Center  
New York, NY 10281-2101  
(212) 415-8700 (Telephone)  
(212) 415-8701 (Facsimile)